

CASING
DESCRIPTION

The invention relates to a casing of an electrical appliance, especially a computer.

A commercially available computer casing generally has two side walls parallel to one another, a front and back wall and a bottom and top wall.

Since the components located inside the computer casing such as hard disks, microprocessors, and so on, on the one hand generate heat during operation and on the other hand, are very temperature-sensitive, these components must be cooled.

For cooling cooling devices are used, which are located inside the computer casing. For cooling the microprocessor a fan sucks cooler ambient air into the casing and blows this air towards the microprocessor. In order that a sufficiently large air flow can penetrate into the casing, openings are usually provided on the rear wall of the casing through which air flows into the interior of the casing. A disadvantage is that noise from the fan reaches the outside and is perceived by the user of such a computer as perturbing. It is also disadvantageous that dirt is frequently sucked into the casing.

It is the object of the invention to further develop a casing reducing the problems described.

The object is solved according to the invention by a casing having the features of claim 1.

The casing of an electrical appliance, especially a computer, has at least one casing wall with a recess facing the interior of the casing. The recess is constructed with

at least one ventilation opening. On the outside the recess is covered by a cover at least in the area of the ventilation opening. By using a cover on the ventilation opening, it is achieved that less noise reaches the outside and less dirt penetrates inside.

The cover furthermore has a protective function. The risk of foreign bodies passing through the openings into the interior of the computer can be largely eliminated.

The wall and the cover can form a substantially flush surface. This is achieved by the recess arranged in the casing and the opening being almost invisible from outside. This type of configuration improves the aesthetic appearance of the casing wall. The cover can more or less completely cover the wall area, which is configured as corrugated, depending on the distance at which the cover runs with respect to the wall. If the cover and the casing wall run in alignment with one another or parallel to one another at only a few millimetres, a circumferential gap can be formed between the two parts via which air exchange takes place if the cover is not already permeable to air.

If the cover projects beyond the wall, it can be somewhat larger than the recess running therebehind. The air intake, for example, of a fan connected to the openings of the recess, takes place via the annular gap running between the wall and the cover. Care should be taken to ensure that the distance between the cover and the casing wall is sufficiently large that the required air flow can be provided for the cooling.

In one embodiment of the invention, the cover is detachably affixed to the recess. Screw or clamping connections are feasible in this case.

It is possible for the cover to have at least one cross-piece which can be inserted in a corresponding fixing opening of the recess. For example, the cross-piece can be constructed with a lug at its outer end which engages in the fixing opening and thus presents a reliable fixing of the cover which can consist of plastic, for example.

It is also feasible that the cover is permeable to air. Thus, air reaches the interior of the casing not only through the slit but also through the cover.

In a further embodiment the cover can be an air filter. In order that the interior of the casing is not contaminated with dust particles located in the ambient air which can impair the functioning of the electrical components, it is advantageous to arrange a filter before the opening. Depending on the particular application, glass fibre, cellulose, paper and a mixture thereof can be used as filter material.

The cover can be used as an advertising medium. Various information can be applied to the surface of the cover, for example, the name of the manufacturer or the type of computer etc., which is thus clearly visible from the outside. Another advantage is that the covers can quickly be changed without major expenditure.

A component to be cooled can be arranged on the side wall opposite to the recess. A direct supply of air can be achieved over a short path from one side of the casing to the opposite side where the component to be cooled is fixed. As a result of the rectilinear flow, the temperature of the intaken air does not increase substantially inside the casing which considerably enhances the cooling performance.

Further features of the invention are obtained from the features of the dependent claims and the other application documents.

The invention is described in detail hereinafter with reference to an exemplary embodiment. In the figures:

Figure 1: is a plan view of an embodiment of the casing according to the invention and

Figure 2: is a sectional view along the line of intersection II-II from Figure 1.

Figures 1 and 2 show a casing wall 1 constructed with a corrugation-shaped recess 2. In the area of its recess 2, the casing wall 1 has a plurality of ventilation openings 3 whereby air can be exchanged between the interior of the computer 8 and the surroundings 9.

The recess 2 is covered by a cover 4 on the outside 9. In this case, the cover 4 has two cross-pieces 6 which run perpendicular to the surface of the cover 4. The ends of the cross-pieces 6 engage in corresponding fixing openings 7 of the recess 2 where they are reliably connected to the casing wall 1 by means of a locating connection.

In plan view, the recess 2 has a circular shape to which the shape of the cover 4 is matched. The surface of the casing wall 1 and that of the cover 4 run on a plane so that these form a substantially flush "complete surface". A circumferential slot 5 is located between the outer edge of the cover 4 and the adjacent casing wall 1. When the electrical appliance is operating, air penetrates into the interior 8 of the casing from outside 9 whereby in this case, the air flows first through the slot 5 and then through the ventilation openings 3.

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The external contours of the recess 2 and cover (=lid) 4 are the same; they are concentric but different shapes are also possible.